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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/461,643	12/14/1999	KEITH DOW	10559/108001	4089

20985 7590 12/10/2002

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EXAMINER

LEE, CHRISTOPHER E

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 12/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/461,643

Applicant(s)

DOW, KEITH

Examiner

Christopher E. Lee

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 November 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY (check either a) or b))

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attachment.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

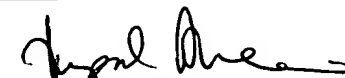
Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1, 3-8, 10-14 and 16-22.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____


RUPAL DHA
PRIMARY EXAMINER

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DETAILED ACTION

Receipt is acknowledged of the Response to Office Action filed on 26th of November, 2002. Claims 5, 7 and 17 have been amended; no claims has been canceled; and no claims has been newly added. Currently, claims 1, 3-8, 10-14 and 16-22 remain as rejected as set forth in the Final Action mailed on 5th of September, 2002.

Response to Arguments

1. Applicant's arguments filed on 26th of November, 2002 have been fully considered but they are not persuasive.

*In response to the Applicant's argument with respect to "Claims 5, 6, 13, and 16-17, as presented, include one or more terms that are considered acceptable "relative terms" as described in various sections of MPEP § 2173.05(b)." on Response, page 3, lines 15-20, the Examiner respectfully disagrees. The Applicant claims are using the term "about equal" in claims 5 and 17, which is unacceptable "relative term" because (1) contrary to the example (citing to *Ex parte Eastwood*, 163 USPQ 316, Bd. App. 1968), the Applicant uses the term "about equal" without a reasonable range (i.e., unlimited range of degree of equal) in the Specification, (2) the "equal" means of the same measure, quantity, amount, or number as another, however, the "about equal" could be considered as non-equal too. Therefore, the term "about equal" without a reasonable range for the invention is unacceptable "relative term" in this specific case as a flexible relative term. And, the term "about 5 mils" in the claims 6 and 13, is also understood as an unacceptable relative term by the Examiner due to the above reason.*

In response to the Applicant's argument with respect to "As another example, MPEP § 2173.05(b) describes the term "substantially" as an acceptable broad term that may be used to describe a particular characteristic of a claimed invention." on Response, page 3, lines 21-26, the Examiner agrees. The Examiner has not described the term "substantially" as an unacceptable "relative term" in this specific case. See the prior Office Actions.

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However, the term "roughly" in claim 16 is a relative term which renders the claim indefinite because the term "roughly" is not defined by the claim, and the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In response to the Applicant's argument with respect to "The art of record fails to disclose or suggest the combination of features recited in independent claim 1...However, this characterization of a "circuit board" is totally different than "a circuit board having multiple layers", as taught and claimed by the Applicant...Therefore, Boaz et al. cannot properly be characterized as describing "a circuit board having multiple layers" as required by applicants' claim 1." on Response, page 5, line 22 through page 6, line 9, the Examiner respectfully disagrees. First of all, the Applicant claims the limitation "a circuit board having multiple layers" in the claims with the transition phrase "having", which could be considered as open-type or closed-type in light of the specification (See MPEP § 2111.03). In the Applicant's invention, the transition phrase "having" in the limitation "a circuit board having multiple layers" should be considered as an open-type in light of the specification because the circuit board should be consisted of other elements with the multiple layers, such as pin holes, etc. Therefore, Boaz et al. teaches the limitation "a circuit board (i.e., motherboard and RIMM board as combined) having (i.e., open-type transition phrase) multiple layers (i.e., RIMM board has multiple layers)". Furthermore, it is noted that the features upon which applicant relies (i.e., the characterization of "a circuit board having multiple layers", which is totally different than "a circuit board", as taught by Boaz et al.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the Applicant's argument with respect to "This characterization of what is admitted as prior art is respectfully traversed. Contrary to the Examiner's characterization, the Applicant...That is,

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Fig. 2 shows the tapering of signal lines 150 and 160, and is further supported by the application which describes the signal lines 150 and 160 as narrowing and/or expanding to the connection point 155.” on Response, page 6, lines 10-26, the Examiner respectfully disagrees. The Applicant claims the limitation **“a second portion of the second signal line (i.e., the portion of expanded part “18 mils portion” of the second signal line) at an acute angle (i.e., ending in sharp point; See prior Action for this definition) relative to a second portion of the first signal line (i.e., the portion of expanded part “18 mils portion” of the first signal line)”**, which is taught by the Applicant’s admitted prior art because the Fig. 1 (Prior Art) is showing the same angular relationship as the angular relationship in Fig. 2 (the Applicant’s invention), such that a second portion of the second signal line at an acute angle relative to a second portion of the first signal line.

In response to the Applicant’s argument with respect to “(1) none of the proposed combinations with the other prior art cited would anticipate or render obvious applicants’ claims” on Response, page 6, line 26 through page 7, line 14, and *“(2) Finally, even if ...none of the proposed combinations would anticipate or render obvious applicants’ claim 1”* on Response, page 9, lines 9-14, the Examiner respectfully disagrees. Contrary to the Applicant’s statement, the prior Office Action mailed on 5th of September, 2002, shows all of the proposed combinations of Boaz et. al. and AAPA, with the other prior art cited would anticipated and/or render obvious the Applicants’ claims. Specifically, the Applicant’s claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boaz et al. in view of Kumakura et al. and Applicant’s admitted prior art. (See the Final Action, item 5).

In response to the Applicant’s argument that there is no suggestion to combine the references (See Response, page 7, line 15 through page 8, line 15), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071,

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5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In

this case, the Examiner validly combined the cited prior art references in a prior art 35 USC §103 rejection with a proper motivation and/or suggestion (See the prior Office Actions). However, the Applicant fails to point out those parts of prior art 35 USC §103 rejection without a proper motivation and/or suggestion, specifically.

In response to the Applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (See Response, page 8, line 16 through page 9, line 8), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to the Applicant's argument with respect to "none of the prior art cited - - whether taken alone or in combination - - describe or suggest the features recited in applicants' claims 1, 14 and 20 respectively." on Response, page 9, line 15 through page 10, line 15, the Examiner respectfully disagrees. Contrary to the Applicant's statement, the Applicant's claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boaz et al. in view of Kumakura et al. and Applicant's admitted prior art (See the Final Action, item 5 and the above argument response), and the Applicant's claim 14 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Boaz et al. in view of Kumakura et al. and Applicant's admitted prior art because the method steps of claim 14 are inherently performed by the apparatus of claim 1, and therefore the rejection of claim 1 applies to claim 14 (See the rejection of the claim 14 in the Final Action). And, contrary to the Applicant's statement, the claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leddige et al. in view of Kumakura et al., AAPA and Boaz et al. (See the Final Action, item 8).

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Conclusion

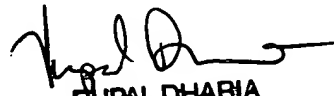
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Christopher E. Lee
Examiner
Art Unit 2189

cel/ *CEL*
December 5, 2002


RUPAL DHARIA
PRIMARY EXAMINER